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Contemporary Didactics in Higher Education in Russia

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Abstract

The article presents the theoretical framework for a competency-based approach in higher education. It shows that the general didactic principles of professional direction, interdisciplinary connections, fundamentalization and informatization form the didactic basis for the competency-based training in university. The article also actualizes the integrated use of effective approaches to training, namely, competency-based, contextual, interdisciplinary, fundamental and subject-information approaches to training, among which the competency-based approach is leading. The basic organizational and pedagogical conditions promoting the formation of competence are defined in the form of the organization of polycontextual modules in training. Besides, the article outlines the ways to enhance the effectiveness of e-learning in the future.

Keywords: formation of competence, didactic basis, contextual, interdisciplinary, fundamental, subject-information approaches, organizational and pedagogical conditions, polycontextual educational module, e-learning, computer animation.

Introduction

We consider contemporary didactics in higher education as a theory of training from the standpoint of the competency-based approach, i.e. training, the purpose of

which is to develop the competence of students. This theory has to resolve the basic problem, namely, what the training that forms the competence of high school graduates should be. The development of contemporary didactics continues, because in spite of the extensive literature, today there is no reasonable certainty in solving a number of didactic issues such as, for example, what the basic principles of the competency-based training are and which system of the selection of the learning content should be chosen. In addition, of course, the potential of e-learning in the competency-based approach is not revealed to the full extent.

The problem of the formation of competence is conditioned by the fact that the competency-based approach does not specify the relevant content, forms, methods and means of training directly in setting a learning objective and learning outcomes (which comprise the leading role of the approach), they should be developed by teachers and researchers.

The purpose of this article is to develop contemporary didactics further, namely, to elaborate the theoretical foundations of the competency-based approach to training university disciplines, which would allow designing the proper methodical system, especially, the principles of training and the system of selecting the content.

The article addresses the following tasks. The first is to justify the relevance of the integrated use of effective approaches to training university disciplines in the process of the formation of all competence's components with the leading role of the competency-based approach. The second is to identify the organizational and pedagogical conditions contributing to the formation of the competence of students in the form of the organization of students' activity, its content and teaching methods. The third is to reveal the competence potential of e-learning and to identify additional opportunities provided by it for further enhancing the effectiveness of these approaches and the organizational and pedagogical conditions.

Materials and Methods

This study examines the methodology of the integrated implementation of several approaches to training that in fact belong to different educational paradigms

(competency-based, knowledge-based, system-activity, learner-centered, and others). At the same time we rely on the materials of the researchers, suggesting a dominant role of the leading competency-based paradigm that is not opposed to others, but supplemented by them on the basis of synergy. In this case, we can talk about a polyparadigmatic approach to training [1], in which methodological pluralism as an essential characteristic of contemporary pedagogics manifests. In our opinion, this approach can play an important role in solving the problem of the formation of competence.

The description of the main provisions of contemporary didactics in higher education is carried out in the framework of the triad, which consists of effective approaches to learning, organizational and pedagogical conditions and the didactic potential of e-learning.

Methods of research: the theoretical analysis of the psychological and pedagogical as well as scientific and methodical literature, the methodological analysis of the State Educational Standards of Higher Education, generalization of innovative pedagogical experience along with the modeling method.

Effective Didactic Approaches

The didactic basis of the competency-based training. As we know, in any model or system of training a university discipline the leading role is played by general didactic principles. It should be noted that these principles are the same in the knowledge-based and competency-based approaches. However, in order to shift from the knowledge-based training to the competency-based one, you must increase the level of the implementation of some general didactic principles. The combination of these principles, which have a significant potential in the formation of competence and are not implemented to the full extent within the knowledge-based approach, could be seen as the didactic basis of the competency-based training [2].

In order to determine which of the general didactic principles should be attributed to the didactic basis, we should note that all of these principles can be divided into two groups: the first is focused on forming knowledge and skills, and the

second is mainly focused on forming the ability and willingness to use them in professional activities. These feature lie at the heart of the competency-based approach in higher education. The first group includes general didactic principles, such as the unity of the content-related and procedural aspects of training, scientific character, systematicity and consistency, systemacity, availability, etc.; they are connected with the formation of knowledge and skills that are the basis of the student's competency and already fully implemented in the content, forms and methods of training in high school. The second group includes general didactic principles of professional direction of training, interdisciplinary connections, fundamentalization and informatization, since they are closely linked to the ability and willingness of the student to apply knowledge and skills beyond the subject field of the discipline. These principles were not fully demanded and implemented in the knowledge-based approach focused only on the formation of strong residual knowledge and skills, but they can be fully implemented in the competency-based approach, which will allow shifting from the knowledge-based training to the competency-based one [2].

The principle of professional direction in the competency-based approach. An important role in the didactic basis is played by the principle of professional direction, in accordance with which the context of the student's future professional activity is purposefully simulated in the process of training the discipline, in particular, the application of acquired knowledge in it; this training is called professionally directed or contextual.

From a psychological point of view, the contextual training has a considerable potential for the formation of students' competence. In fact, speaking about the difference of knowledge and values, A.A. Verbitsky says: "Values are what can be monologically described as an oral or written text. Being internalized, for example, through memorizing the text, values as the foundation of knowledge may not become the property of the individual, i.e. the actual knowledge, that, what possesses a personal sense for a person, being a guide to action, or expresses one’s attitude to the world, society, other people and to oneself ... The context of life and work, the

context of the professional future specified by the corresponding didactic and psychological "technology", fills the educational-cognitive activity … of university students with the personal sense, determines the level of their activity, the degree of the involvement in the processes of knowledge and transformation of reality" [3].

Over the past decades, A.A. Verbitsky and his followers have developed a psycho-pedagogical theory, which plays an important role in the competency-based approach in higher education [4].

The principle of interdisciplinary integration in contemporary didactics. Another basic principle is the principle of interdisciplinary integration or the principle of multidisciplinary (interdisciplinary) connections. In the competency-based approach the principle of interdisciplinary integration should be clarified proceeding from the fundamental role of the cognitive process of applying knowledge. Here we understand the interdisciplinary communication as the application of knowledge of one subject matter in the process of learning another one, and interdisciplinary integration as strengthening and establishing new interdisciplinary connections in order to improve the quality of education [2].

The structure of the cognitive process of applying knowledge. The application of the knowledge of the subject matter *A* in some area *X* (it may be another subject matter *B* or an occupational field *P*), which occurs in the process of solving a certain problem from this area, is a complex process, which is carried out in three stages. At the first stage the student designs a disciplinary model of the problem from the area *X*, recording its condition in the terms of the subject matter *A*, at the same time realizing the connection of the problem with this subject matter and using the knowledge of it to design such a model. At the second stage the obtained model is examined using other knowledge of the subject matter *A*, thereby producing new knowledge relating to the subject matter. Finally, at the third stage the student interprets this knowledge in the area *X*, getting new knowledge in this area as a solution to the problem. The three-stage process is universal. It means if *X* is another subject matter, we get a description of interdisciplinary connection, if *X* is an occupational field, we get a description of the process of applying knowledge in the future work. Thus, in the

application of knowledge outside the subject field of the subject matter the student learns to apply this knowledge in their professional activities. Understanding the structure of this process, the teacher can generate and evaluate the student's ability to apply their knowledge more effectively.

It should be noted that the situations of applying knowledge in the subject field of another subject matter can be divided into two types. The situation of the first type occurs, for example, in training Mathematics, when the student uses the knowledge of Physics, namely, a formula, a rule or a law of Physics, solving a mathematical problem. In this case, the interdisciplinary application of knowledge is carried out in one go, which consists in the direct application of the knowledge of Physics in the process of learning Mathematics and does not imply the creation of the local subject field of Physics.

In the situation of the second type, the subject field of the learnt subject matter creates a local subject field of another subject matter, where the knowledge of the parent subject matter is applied. An example is a solution to an applied mathematical problem with the physical context related to the subject field of Physics, provided that the problem is solved through the application of mathematical knowledge. In this case, the local subject field of Physics is created within the subject field of Mathematics, where the knowledge of Mathematics is applied. Thus, the situation of the second type is implemented at two times: during the first one the local subject field of the external subject matter is created, while during the second one the knowledge of the parent subject matter is applied in this field.

The local subject field of the external subject matter possesses integrity, which is characterized by the fact that students realize that it is generated by this subject matter, and have the knowledge of this subject matter, which is sufficient to solve the problem.

With regard to the understanding of the interdisciplinary connection from the perspective of the knowledge-based approach as a coherent study of the concepts, methods and theories from various disciplines, in fact, it means the interdisciplinary application of knowledge, and in this way, it corresponds to the competency-based

understanding that expands and develops the understanding of this connection, which was in the framework of the knowledge-based approach.

This corresponds to the theory of the integration of education developed by A.Ia. Daniliuk and advanced by O.V. Shemet [5, 6]. In accordance with this theory, "The structural unit of the competency-based education is not a separate academic subject, but educational environment, in which not only the specific subject matters are studied, but a particular scientific phenomenon or event recreated by a theoretical model". [6] As we have seen, in order to create educational environment, it is necessary to connect a studied concept with the local subject fields of relevant subject matters.

Summarizing the above said, we emphasize that the competency-based approach makes it necessary to extend the principle of interdisciplinary connections up to a more capacious and dynamic principle of interdisciplinary integration, in accordance with which teaching every subject matter should be carried out using a wide variety of links of this subject matter with other subject matters that are both related to it and distant from it, systematically creating situations of an interdisciplinary application of knowledge preferably in each unit with the help of local subject fields.

The competency-based meaning of the principle of fundamentalization. Turning to the principle of fundamentalization, we should note that its value in the current conditions is also increasing, not only because of the rapid obsolescence of knowledge. It is important to form the fundamental core of knowledge of the subject matter in the form of a set of background, invariant and long-life knowledge, because they are the basis of the competence of the graduate, "prolonged" in the future for many years, ensuring their ability and willingness to apply this knowledge in the long term, in a changing professional activity [2].

The principle of informatization. Finally, it should be pointed out that in the present conditions of the emerging information society, of course, the role of the general didactic principle of the informatization of training is increasing. According

to it, training should be closely linked to modern information and communication technologies (ICT), increasing the effectiveness of training.

Effective approaches to training. Each of these general didactic principles determines an approach to training aimed at its implementation. They are contextual, interdisciplinary, fundamental and subject-information approaches.

It should be noted that the didactic role of these approaches differs from the role of the competency-based approach, which sets learning objectives and learning outcomes, but does not indicate the ways to achieve them, and does not determine the appropriate content, as well as the forms, methods and means of training. On the contrary, contextual, interdisciplinary, fundamental and subject-information approaches define the content, as well as some forms, methods and means of teaching students in accordance with the objectives and results of the competency-based approach.

Currently, contextual, interdisciplinary, fundamental and subject-information approaches, as well as the corresponding general didactic principles that form the didactic basis of the competency-based training, are implemented in the training of university students only partially. The principle of fundamentalization corresponding to the scientific traditions of Russian education is implemented to a greater extent. However, as previously stated, the transition from the knowledge-based training to competency-based training involves the full realization of these general didactic principles.

In order to form competence and improve the quality of training, other approaches can also be used, such as, for example, a problem approach, a project approach, a task approach, which are consistent with the objectives and results of the competency-based approach. Such approaches possess a less didactic entity, as they are closely linked not with the content, but with the forms, methods and means of training, for this reason their effectiveness is limited in comparison with the most productive approaches from a didactic point of view, which include contextual, interdisciplinary, fundamental and subject-information approaches together with the competency-based approach that defines learning objectives and outcomes.

The integrated use of effective approaches. The next step consists in the integrated use of these approaches in training university academic subjects, which allows using the potential of the formation of competence that each of these approaches has.

It is important to note that these approaches complement each other with missing didactic components. Thus, the competency-based approach is complemented by content, forms, methods and means of training, which allow achieving its objectives and results, while other approaches developed back in the knowledge-based paradigm, such as the contextual one, are complemented with adequate objectives and results of the competency-based approach, which improves the effectiveness of their use. For this reason, it is not just the arithmetic addition of the results of using effective approaches to training, but the simultaneous increasing of the effectiveness of each of them, that happens in their integrated use. As a result, there is a more significant, non-linear increase in the effectiveness of using these approaches. It is called a synergistic effect.

In the following, we will consider the organizational and pedagogical conditions that contribute to the improvement of the effectiveness of students' training.

Organizational and Pedagogical Conditions that Increase Training Effectiveness in the Russian Federation

In our view, an important task of the teacher is to create the organizational and pedagogical conditions that are conducive to the formation of students' competence.

We understand organizational and pedagogical conditions as the competency-oriented forms of the organization of students' activity, its content and methods [7]. These conditions involve the focus of training methods on the students' independent work, using modern educational technologies, organizing the effective interaction of the subjects of the learning process in the information-training system, the positioning of the teacher as an expert, adviser and organizer of students' learning

activities. The implementation of these conditions requires adequate forms of training sessions, the content of educational activity of students and teaching methods.

According to the current Federal State Educational Standards of Higher Education (FSES of HE), students' competence is regarded as a set of stipulated competencies, the formation of which should be carried out in the course of learning the whole complex of academic subjects, modules and practices included in the principal educational program. However, the educational practice developed by now can not ensure the effectiveness of this process for several reasons.

The analysis of the requirements to the structure of the principal educational Bachelor and Master Degree Programs shows that the theoretical training of students (academic subjects and modules) constitutes much of the workload of the programs. On average, the workload of practices constitutes only 15% of the workload of the theoretical training in some Bachelor's majors. Traditionally, the theoretical training is focused on the formation of only subject knowledge and skills. The structure of the principal educational program simulates the subject-disciplinal theoretical training of students, like it was in the knowledge-based paradigm of education.

For this reason, teachers and researchers use the concept of subject competencies, as a rule, understanding them as projections of competencies provided by the standards on the subject area of their discipline. This implies that if all subject competencies are formed, it will provide a complete formation of the entire set of competencies provided by the standard, i.e. the competence of the student. However, this is not quite true. At least, the educational practice confirms that fairly good results are achieved within the subject-disciplinal training in the sense of acquiring subject knowledge, skills and abilities, but the ability and willingness of students to use them to solve problems that lie outside the subject field of the discipline, which is an essential characteristic of competencies, are loosely formed. In this regard, there is a need to continue identifying the didactic potential of the theoretical training of students from the standpoint of the competency-based approach in the sense of a certain integration of academic subjects.

The possibility of this integration lies in the structure of Bachelor and Master Degree Programs in the description of the theoretical training of students, since this structure requires not only academic subjects, but modules as well. The didactic purpose of the modules is not explicitly defined, as well as there is no indication to their content and place in the theoretical training. Therefore, there is a clear need and opportunity to clarify the concept of the theoretical training, structured as a set of subjects and modules, which are focused on the formation of competencies.

The didactic approaches to training, which are mentioned in the previous section of the article, constitute the basis of this concept. As for the organizational and pedagogical conditions for the formation of competencies, the activity essence of the very competence sets a methodological vector of the creation of these conditions, namely, the involvement of students in activities, which are adequate to the competencies formed, and providing a pedagogical support for those activities [8].

Since it is impossible to form any of the competencies, including subject ones, specified in the standard in the process of learning a single subject matter properly, it is important to implement interdisciplinary connections of the learnt academic subjects purposefully as it was noted in the previous section.

As noted above, in order to implement interdisciplinary connections, it is important to involve students in activities related to the use of subject knowledge outside the subject area of the discipline. We will consider the organizational and pedagogical conditions to be met by such activities [9].

For example, if students are trained in activities that focus on the use of subject knowledge in solving problems relevant to their present and future, it becomes possible to form an attitude to that knowledge, an awareness of their importance in the present and the future. Thus, the motives to study subjects will be formed in these activities, which will improve the quality of the actual subject knowledge.

Polycontextual educational modules as the basic organizational and pedagogical conditions of training. The analysis of the requirements of the current Federal State Educational Standards of Higher Education to learning outcomes shows that the learning activities related to the application of subject knowledge outside the

subject area should contain the following contexts, namely, professional, interdisciplinary (application of knowledge in the subject area of another subject); applied (tasks of applied orientation), socio-economic and historical, and regional contexts (problems and tasks, reflecting the socio-economic and geopolitical aspects of the region). In this sense, learning activities should be polycontextual [10].

Educational clusters, creating polycontextual modules. In order to ensure the effective polycontextual educational activity of students, it is necessary to combine the organizational and technological conditions for this activity with modern e-learning tools at interdisciplinary and metadisciplinary levels. This can be achieved with the cooperation of several departments and professors of various disciplines in order to create an adequate polycontextual subject of the educational activity of students. This requires an organizing initiative aimed at the implementation of this interaction, as well as the learning technologies to create polycontextual educational and cognitive activity.

Thus, in order to form the competencies of students, it is necessary to receive an educational cluster as a structural entity, which develops and implements a scientific and methodological product in the form of polycontextual learning and cognitive activity of students, by combining the efforts of various departments. The main organizational and pedagogical condition of this activity within the framework of the theoretical training of students, such as the creation of an interdisciplinary context in training a discipline, is the use of special polycontextual educational modules focused on the formation of competencies.

The components of the content of a polycontextual module. The content of this module should include four components: cognitive, activity, reflective and motivational-value, which corresponds to the known structure of competencies and competence [8].

The cognitive component of the content of the module is presented by the knowledge, which will be required in the student's activities in this module. It should contain a basic set of subject and professionally directed knowledge from various disciplines of subject oriented training. The cognitive component of the module is to

be formed on the basis of didactic failure, i.e., there should be a lack of basic knowledge for the student to solve problems, what is more, the lack should be big enough not to let them come to such a conclusion independently.

The activity component of the content of the module specifies the main types of activity of students, mastered in the module. The modelling of the content of the student's activity at the stage of the development of a training course allows designing the appropriate technology of its development. The activity component of the content designs the subject of all the kinds of students' activities in the framework of this module, needed to achieve the purposes of learning it. The structure of this component includes interdisciplinary, metadisciplinary, professionally directed, and other practice-oriented tasks of the student's educational program specialization, to solve which the complex of the knowledge of the cognitive component is used. Interdisciplinary tasks in the module are those, whose solving requires the application of knowledge from various disciplines of theoretical training, while metadisciplinary tasks are the subject of the student's educational activities in which the basic techniques of knowledge, self-learning and self-organization skills are mastered. Professionally oriented tasks in the module model the context of professional activity. The student carries out quasiprofessional activity in order to solve them using subject knowledge and skills of the disciplines of the theoretical training.

The next, reflective component in the content of the module provides an object of the reflexive activity of students, in which the skills of self-assessment, as well as valuable relationships, are formed.

Finally, the motivational and valuable component, which makes it possible to build and develop the valuable aspects of professional competencies as a sphere of motivation and development of interest in the profession, should be provided in the content of the module.

Note that these components of the content of the module can be closely linked. For example, a professionally orientated mathematical problem bears the elements of the cognitive component in itself as an educational and cognitive task, the activity component, because it simulates the elements of the future professional activity, the

reflexive component, since solving it, the student evaluates and adjusts their preparation, as well as the motivational and valuable component, which means, being professionally oriented, it motivates the student to learn Mathematics [11].

The polycontextual educational module as an organizational-pedagogical condition of the formation of students' competencies in the process of theoretical training has a considerable potential, because the effective didactic approaches, mentioned in the previous section, can be used within this module. The module is also an integrating basis for a range of disciplines of theoretical training; it strengthens their interdisciplinary connections, which promotes learning and cognitive activity that is adequate to the competencies formed.

In addition, the polycontextual module has specific organizational functions. For example, it provides conditions for the independent educational activity of students and the teacher's pedagogical support for it. The teacher mainly advises and directs the work of students. Finally, the module involves the expansion of students' experience in self-control and self-evaluation of their performance.

In the next section we will consider the issues of the implementation of effective didactic approaches and organizational and pedagogical conditions in e-learning. The features of the implementation of these approaches in e-learning obviously determine the specific nature of the relevant organizational and pedagogical conditions.

Didactic Potential of E-learning in the Russian Federation

New great opportunities to improve the effectiveness of the training are provided by modern ICT, such as electronic textbooks, training programs and simulators, as well as generally specialized information-educational environment that uses the possibilities of local and global computer networks.

The Federal Law "On Education in the Russian Federation", adopted in 2012, allows and encourages universities to use e-learning programs and distance learning technologies. The Federal State Educational Standards of Higher Education also require a widespread use of ICT in the process of learning, including e-learning;

electronic educational resources in the form of hardware and software are certainly needed for this.

E-learning is a learning technology based on the use of computers and data transmission systems for the presentation and delivery of knowledge, support of interaction between the student and the teacher, as well as knowledge control. E-learning presents different methods and forms of learning through ICT.

Note that it is necessary to distinguish between e-learning and distance learning. Distance learning is a broader concept that includes a variety of forms and types. Its main difference is learning in the distance, which is not important in e-learning; you can learn remotely and in the classroom under the supervision of the teacher. Thus, distance learning is an independent form, in which ICT is a leading learning tool.

Currently, the interactive communication with students through information and communication networks is promising, so the concept of distance and e-learning approach each other on the basis of a wide application of ICT.

Researchers started to consider e-learning as early as the 1990s owing to the development of ICT, and that led to a rapid development of e-learning. The first phase of its development was characterized by the active use of presentations, the use of test programs and the development of electronic textbooks.

The second phase of the e-learning development was connected with corporate training. It involved designing e-learning, organization and support tools of the educational process, working out a variety of e-learning management models, developing approaches to evaluating the quality and effectiveness of e-learning.

The next, which is the third, stage of the e-learning development was based on the creation of software systems, providing a comprehensive solution of problems of e-learning, namely, content management systems, the delivery of training materials, the testing of interactive support of the training environment, knowledge management systems, training management systems.

Finally, the fourth stage of development, which falls at the beginning of the 21st century, is characterized by the fact that e-learning actively began to be

implemented in the traditional training in a variety of organizational forms, such as the support of the traditional on-site and off-site training. E-learning in the form of e-learning courses started to be used widely in distance education in the programs of additional vocational training, advanced training of university teachers, as well as in pre-university training.

E-learning in contemporary didactics. One of the goals of the development of e-learning courses is to improve the effectiveness of the training process aimed at the formation of subject competencies of students. In the system of full-time education e-learning courses can be used for the organization of independent work of students, which makes it possible to use the technology of open education, for which e-learning courses are a major source of educational information.

One of the most effective platforms for the development of e-learning courses is a widely used system called *Moodle* (Modular Object-Oriented Dynamic Learning Environment). The Moodle system, written by the Australian Professor M. Dougiamas, is translated into dozens of languages and is used in more than one hundred countries around the world. Being easy to use and an open source code that allows modifying and extending the functionality of the system when needed made it very popular.

This system possesses big possibilities to deliver information, such as the admissibility of various formats of files used, the creation of a glossary, the placement of tasks for independent fulfillment, the use of the bank of test materials. The Moodle system also offers great opportunities for communication, such as file sharing, the ability to inform the participants of the training process through mailings and others. At the same time the system is distributed in the open source code, which makes it possible, if necessary, to supplement and change its functionality. The implementation of the possibilities of the Moodle system to design an adaptive learning system is described, for example, in the work of T.V. Zykova [12].

The use of the possibilities of local and global computer networks for e-learning, the ability to work in the system through mobile devices make this system even more convenient. However, its benefits can be both its shortcomings. For

example, a user-friendly web interface is vulnerable to attack like any site, or you may face problems reading information stored in the electronic courses from a mobile device.

At present, Russian universities are reviewing the strategy of their development, aimed at resolving the conflict between the rapidly growing needs of the information society and the inability to meet them in the traditional education system. Thus, the program of development of Siberian Federal University (SFU) for 2011-2021 determined constructing a new paradigm of education, overcoming the systemic contradictions of the labor market and the market of scientific and educational services as a priority. The development of e-learning and distance learning technologies is one of the strategic projects of SFU, and it is systemic. Thus, since 2010 SFU has been designing and implementing e-learning courses in the educational process.

It should be noted that in recent years e-learning in Russian universities has been facing a number of challenges, among which we should highlight an insufficient volume of electronic materials in many disciplines, inadequate training of teachers to use e-learning resources, the lack of regulatory framework in the field of e-learning, including, unresolved issues in the field of copyright, related to the presentation of developed materials in the Internet in the public domain. As a result, now the e-learning potential is not used enough.

Turning to the didactic aspects of the implementation of the most effective approaches in terms of e-learning different university disciplines, we should note that they are underexamined. Let us consider some aspects of this problematics.

The professional context and the local subject field of computer animation. First of all, again, we note that the effective tool of learning a range of disciplines is educational and cognitive tasks with a practical, applied focus. Within the contextual approach professionally directed tasks are used as such tasks. Beyond the framework of e-learning it is often text tasks, designed to simulate a professional and social context of the student’s future professional activity in their mind and imagination. Interdisciplinary tasks, which also have a text nature, are certainly used in the

interdisciplinary approach. The local subject field of another related discipline is to appear in the mind of the student solving those tasks.

E-learning contains considerably more opportunities to create the professional context or the local subject field not only in the imagination of the student. It is worth noting that a few decades ago educational films, which clearly showed the relationship of the discipline with the production, technology, and other disciplines, were created and successfully used.

However, the movie format that involves using a movie camera to show a movie shot on film has not evolved in the video format over years that is convenient for use on personal computers, because it meant doing a great job. As a result, the educational film as an efficient means of training became a thing of the past, while visual didactic possibilities of computer technology have not come to replace them yet.

Meanwhile, these possibilities are rather big. These include, in particular, video for business gaming, in which the situations of professional activity, leading to the formulation of a professionally directed learning and cognitive task, can be simulated by means of computer animation. For example, the means of animation can help to simulate a meeting of experts to discuss a problem situation in enterprise management and to elaborate a production decision. Such videos would allow formulating and solving professionally directed and interdisciplinary problems clearly and convincingly.

It is possible to include the elements of a modern interface with a didactic purpose in the training program, such as pop-ups, which contain the necessary knowledge from a related discipline, creating its local subject field. By the way, our students, who actively use laptops and tablets outside the classroom, mastered the possibilities of computer programs long ago.

Thus, the potential of didactic approaches discussed above may be more fully disclosed in e-learning.

The organizational and pedagogical conditions, which the previous section is dedicated to, may also be implemented in e-learning in the form of polycontextual modules in various academic disciplines.

We believe that one of the perspective directions of the development of contemporary didactics is the elaboration of e-learning courses for many university subject matters, based on successful approaches and organizational and pedagogical conditions.

It should be noted that the active work on the elaboration of such courses is carried out, for example, at the Institute of Space and Informatic Technologies of SFU; electronic educational resources are developed and placed in the informational-training system of SFU that functions on the basis of the Moodle platform.

Conclusion

The article develops the theoretical basis of the competency-based approach in higher education. The didactic basis of the competency-based training is singled out from the totality of general didactic principles of training in the form of the principles of professional orientation, interdisciplinary connections, fundamentalization and informatization with the greatest potential in the formation of didactic competence. Besides, the features of the implementation of these principles in the conditions of the competency-based approach are revealed. Based on this, the necessity and possibility for a complex use of competency-based, contextual, interdisciplinary, fundamental and subject-information approaches to training, which play a special role in the formation of all the components of competence, are justified. It is important to say that the competency-based approach among them is leading.

Furthermore, the article defines the basic organizational and pedagogical conditions as various forms of the organization of students' activity, its content, as well as the relevant training methods, contributing to the formation of competence. It also shows that the organization of polycontextual modules in training university courses plays an important role.

Apart from that, the article outlines the ways to further enhancing the effectiveness of the analyzed approaches, organizational and pedagogical conditions in e-learning.

The results and conclusions allow developing the basic principles of training university disciplines and designing an appropriate system for selecting content, which should occupy a central place in contemporary didactics.

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